CLAIMS

What is claimed is:

1. A method for screening compounds for the capacity to alter secretory vimentin activity, comprising:

a) providing:

i) a first polypeptide sequence comprising at least a portion of vimentin;

ii) a second polypeptide sequence comprising at least a portion of a protein known to interact with vimentin; and

iii) one or more test compounds;

b) combining in any order, said first polypeptide sequence comprising at least a portion of vimentin, said second polypeptide sequence comprising at least a portion of a protein known to interact with vimentin, and said one or more test compounds under conditions such that said first polypeptide sequence, said second polypeptide sequence, and said test compound interact; and

c) detecting the presence or absence of an interaction between said polypeptide sequence comprising at least a portion of vimentin and said polypeptide sequence comprising at least a portion of a protein known to interact with vimentin.

2. The method of Claim 1, wherein said first polypeptide sequence is selected from the group consisting of secretory vimentin, vimentin fragments, vimentin byproducts, and vimentin metabolites.

3. The method of Claim 1, wherein said second polypeptide comprises a monoclonal antibody.

4. A compound capable of inhibiting the binding of vimentin to the monoclonal antibody of claim 3.

5. The method of claim 1, wherein said second polypeptide comprises a polyclonal antibody.

6. A compound capable of inhibiting the binding of vimentin to the polyclonal antibody of claim 5.

7. The method of claim 1, wherein vimentin is secreted from a cell of mesenchymal derivation.

8. The method of claim 1, wherein vimentin is secreted from a monocyte.

9. The method of claim 1, wherein vimentin is secreted from a monocyte-derived macrophage.

10. The method of claim 1, wherein secretory vimentin is bound to a cell of its origin.

11. The method of claim 1, wherein secretory vimentin is unbound.

12. The method of claim 1, wherein secretory vimentin is bound to a cell other than its cell of origin.

13. A method for pathogen killing, comprising:

a) providing:

i) a pathogen;

ii) one or more compounds that decrease the bioavailability of secretory vimentin;

b) combining in any order, said pathogen and said one or more compounds under conditions such that said pathogen is exposed to a decreased amount of bioavailable secretory vimentin.

14. The method of claim 13, wherein the pathogen is bacterial.

15. The method of claim 13, wherein the said one or more compounds decreases vimentin secretion.

16. The method of claim 13, wherein the said one or more compounds increases secretory vimentin metabolism.

17. The method of claim 13, wherein the said one or more compounds comprise antisense oligonucleotides.

18. The method of claim 13, wherein the said one or more compounds comprise small interfering RNA duplexes (siRNAs), or vector encoding said siRNAs, configured to inhibit expression of vimentin.

19. The method of claim 13, wherein said one or more compounds inhibit extracellular bioavailability of secretory vimentin.

20. The method of claim 13, wherein the said one or more compounds comprise monoclonal antibodies.

21. The method of claim 13, wherein said one or more compounds comprise polyclonal antibodies.

22. The method of claim 19, wherein the said one or more compounds comprise a secretory vimentin antagonist.

23. The method of claim 19, wherein the said one or more compounds comprise a neutral thiol proteinase.